

REMARKS

Claim 1 has been amended to incorporate subject matter of Claims 2, 4 and 5. More particularly, Claim 1 has been amended to recite that sheet-shaped adhesive further comprises triallyl (iso)cyanurate, and that the organic peroxide is contained in the amount of 2.2 to 3.0 parts by weight based on 100 parts by weight of the ethylene-vinyl acetate copolymer and ratio of the organic peroxide to triallyl isocyanurate is in the range of 60:40 to 52:48. Additional support for amended Claim 1 can be found at, for example, page 5, lines 20-26, page 6, lines 1 and 3-7. Claims 2, 4 and 5 have been canceled. Upon entry of this Amendment, which is respectfully requested, Claims 1, 3 and 6-12 will be pending.

Preliminary Matters

On the Office Action Summary page, the Examiner did not indicate the status of the drawings.

Applicants request that the Examiner indicate the status of the drawings in the next Action in response to the present Amendment.

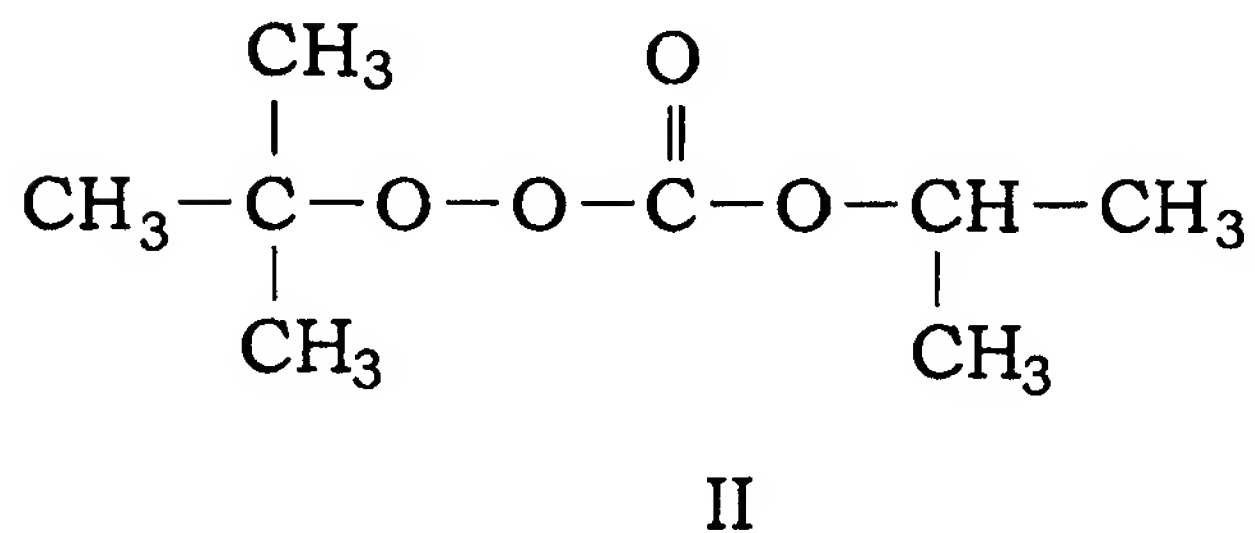
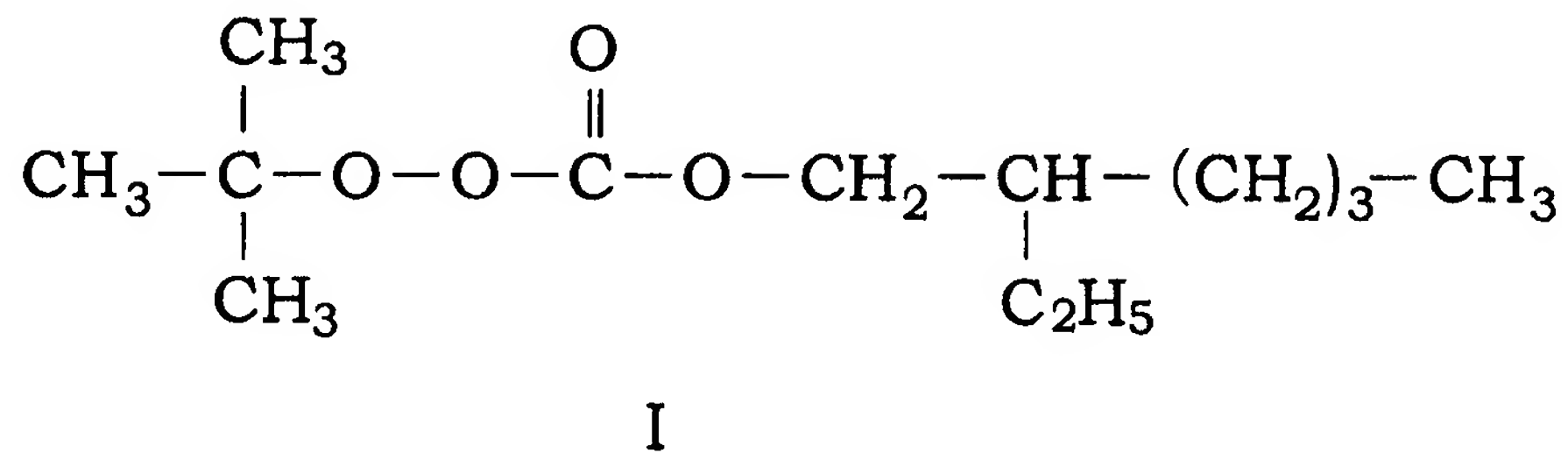
Election/Restrictions

Applicants affirm the telephonic election of December 15, 2009, wherein Group I, Claims 1-8, was elected without traverse.

Response to Claim Rejections Under §102

Claims 1-8 have been rejected under 35 U.S.C. §102(a) as allegedly being anticipated by JP 2001-031937 to Yuji et al. Applicants respectfully traverse.

The present claims are directed to a sheet-shaped adhesive comprising ethylene-vinyl acetate copolymer organic peroxide and triallyl (iso)cyanurate contained therein, wherein the organic peroxide is peroxy carbonate having a formula I or II:



and wherein the organic peroxide is contained in the amount of 2.2 to 3.0 parts by weight based on 100 parts by weight of the ethylene-vinyl acetate copolymer and ratio of the organic peroxide to triallyl isocyanurate is in the range of 60:40 to 52:48.

A transparent adhesive layer (i.e., sheet-shaped adhesive) that bonds two glass plates to each other or a glass plate (for film-reinforced glass) to a plastic film must have excellent adhesion and penetration resistance. It is further necessary to use chemical materials that do not result in environmental pollution. In this regard, 1,1-bis(t-butylperoxy)-3,3,5-

trimethylcyclohexane has been used as crosslinker (organic peroxide) for cross-linking ethylene-vinyl acetate copolymer for a long time, whereby it cross-links the ethylene-vinyl acetate copolymer in relatively short time to bring about a sheet having excellent adhesion properties and penetration resistance.

The organic peroxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, is however, reported to accumulate in organic bodies. Since laminates such as laminated glass are required to have further improved penetration resistance in view of safety, it is necessary to find an organic peroxide which has a basic structure different from that of 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, and which can form a sheet having excellent adhesion and penetration resistance.

Yuji discloses an adhesive for a reinforced glass comprising ethylene/vinyl acetate copolymer (EVA), organic peroxide, a cross-linking auxiliary and an adhesion promoter. Yuji further discloses a great number of examples of the organic peroxide at paragraph [0017]. Further, Yuji discloses in the Examples that 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane is used in an amount of 1 part by weight. Thus, Yuji fails to disclose or suggest the present peroxy carbonate in an amount of 2.2 to 3.0 parts by weight.

In addition, Yuji discloses at paragraph [0018] that examples of the cross-linking auxiliary include triallylisocyanurate (TAIC) and trimethallylisocyanurate. Yuji further discloses that the cross-linking auxiliary is preferably used in an amount of 10 or less parts by weight based on 100 parts of EVA. Moreover, in the Examples, TAIC is used in an amount of 2 parts by weight. Thus, the Examples of Yuji disclose a ratio of the organic peroxide to triallyl isocyanurate of 33:67, which is outside the presently claimed ratio range.

Applicants direct the Examiner's attention to Comparison Examples 1 and 2 of the present specification, which use 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, and which satisfy the presently claimed ratio of the organic peroxide to triallyl isocyanurate. Compared to the Comparison Examples, the working Examples of the present specification use the presently claimed peroxy carbonate within the presently claimed ratio of the organic peroxide to triallyl isocyanurate. The adhesives of the working Examples exhibit enhanced torque, improved penetration resistance and low haze with a variation of hazes being repressed. Moreover, the presently claimed peroxy carbonate does have the environmental issues associated with 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane.

In addition, as demonstrated by the attached Declaration by Mr. Masao Hashimoto, the presently claimed ratio of the organic peroxide to triallyl isocyanurate is critical. In other words, the experimental data presented by Mr. Hashimoto demonstrates that it is critical that the ratio of the organic peroxide to triallyl isocyanurate be in the range of 60:40 to 52:48 in a sheet-shaped adhesive containing the peroxy carbonate having presently claimed formula I, in order to obtain excellent torque, penetration resistance, adhesion and reduced haze with a variety of hazes.

Thus, Yuji fails to anticipate or render obvious the present claims. Accordingly, withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No.: 10/599,288

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CUSTOMER NUMBER

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